

STI.9875

CLAIMS

1. (Currently Amended) A method for managing defects ~~a defect table stored on a recording medium of in~~ a mass storage device, the method comprising steps of:

- (a) obtaining at least one segment of the a defect table from a data storage the recording medium of the mass storage device, wherein the defect table is partitioned into a plurality of segments ~~that are physically distributed throughout the recording medium~~; and
- (b) copying the at least one of the plurality segments segment of the defect table into a memory volatile storage medium, the volatile storage medium being operably coupled to a microcontroller of the mass storage device.

2. (Canceled)

3. (Currently Amended) The method of claim 1, wherein the copying step (b) further comprises the steps of:

- (b)(1) identifying-determining at least one of the plurality of segments segment of the defect table that ~~are~~ is associated with the most recently used plurality of data regions of the mass storage device; and
- (b)(2) copying at least one of the plurality of identified segments into a memory volatile storage medium, the volatile storage medium being operably coupled to a microcontroller of the mass storage device.

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4. (Currently Amended) The method of claim 1, wherein the copying step
(b) further comprises the steps of:

- (b)(1) determining that a size of a segment is not greater than an allocated memory a predetermined size of a defect buffer in a volatile storage medium;
- (b)(2) determining that the predetermined size of the defect table is greater than the predetermined size of a defect buffer in the volatile storage medium; and
- (b)(3) copying the segment into the memory defect buffer in the volatile storage medium.

5. (Currently Amended) The method of claim 1, wherein the volatile storage medium further comprises a plurality of segments and the method further comprising comprises the steps of:

- (c) obtaining an application of the mass storage device; and
- (d) committing a portion of the memory adapting a quantity of the plurality of segments to the application.

6. (Currently Amended) The method of claim 5, wherein the application further comprises a multimedia application and the adapting step (d) further comprising comprises the steps of:

- (d)(1) obtaining a quantity of simultaneous multimedia streams; and
- (d)(2) committing a portion of the memory to each multimedia stream setting the quantity of the plurality of segments in reference to the quantity of simultaneous multimedia streams.

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7. (Currently Amended) The method of claim 1, wherein the volatile storage medium further comprises a plurality of segments and the method further comprises comprising the steps of:

- (c) obtaining a quantity of defects found during a manufacturing test process of the mass storage device; and
- (d) committing a portion of the memory adapting a quantity of the plurality of segments to the quantity of defects.

8. (Canceled)

9. (Original) The method of claim 1, wherein the mass storage device further comprises a disc drive.

10. (Currently Amended) The method of claim 1, wherein the memory volatile storage medium further comprises a cache.

11. (Original) The method of claim 10, wherein the cache further comprises a cache selected from a group consisting of an associative cache, a first-in-first-out cache, a multilevel cache, a single level cache, a chained cache, and a linked list cache.

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12. (Currently Amended) A data storage device disc drive, comprising:

a data storage medium;

a memory;

a defect table listing the defects on the data storage medium, wherein

the defect table is partitioned into a plurality of segments;

a base;

a disc rotatably attached to the base;

an actuator for carrying a transducer head in a transducing relation

with respect to the disc; and

a data storage disc drive controller, communicatively coupled to the

data storage medium and the memory, operably configured to:

actuator, which further includes:

obtain at least one segment of the defect table from the

data storage medium; and

copy the at least one segment of the defect table into a

memory.

an obtainer of the defect table from the recording medium of the

mass storage device, wherein the defect table is

partitioned into a plurality of segments; and

a transferor of one of the plurality of segments of the defect table

into a defect buffer in a volatile memory device, the

transferor being operably coupled to the obtainer.

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13. (Currently Amended) The data storage device disk drive of claim 12, wherein the controller is further configured to: ~~transferor further comprises:~~

identify at least one segment of the defect table that is associated with the most recently used data regions of the mass storage device;

and

copy at least one of the identified segments into the memory.

a determiner of at least one of a plurality of segments of the defect table that are associated with a plurality of most recently used data regions of the recording medium of the mass storage device, the determiner being operably coupled to the defect table on the recording medium; and

a transferor of at least one of the plurality of the most recently used segments of the defect table into the volatile storage device, the transferor being operably coupled to the determiner, the defect table, and the defect buffer.

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14. (Currently Amended) The data storage device disc drive of claim 12, wherein the controller is further configured to: transferor further comprises:
- determine that a size of a segment is not greater than the memory; and copy the segment into the memory.
- a partition determiner, that determines that the defect table on the recording medium is partitioned into a quantity of one or more segments, the partition determiner being operably coupled to the recording medium;
- a defect table size determiner, that determines that the defect table on the recording medium is bigger than the defect table in the volatile memory device, the size determiner being operably coupled to the recording medium; and
- a segment transferor, that transfers the segment of the one or more segments of the defect table on the recording medium into the defect table in the volatile storage device, the segment transferor being operably coupled to the recording medium, the partition determiner, and the size determiner.

15. (Currently Amended) The data storage device disc drive of claim 12 14, wherein the one or more plurality of segments further comprise one or more than one segments that are physically distributed throughout the recording data storage medium.

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16. (Currently Amended) The data storage device disc drive of claim 12, wherein the controller is further configured to:

obtain an application of the data storage device; and
commit a portion of the memory to the application.

~~defect buffer in the volatile storage medium is partitioned into a quantity of one or more segments, the apparatus further comprising:~~

~~an obtainer of the application of the mass storage device, that obtains an indication of the type of application from a source; and an adapter, that adapts the quantity of the one or more segments of the defect buffer in the volatile memory device to the application, the adapter being operably coupled to the obtainer and the defect buffer.~~

17. (Currently Amended) The data storage device disc drive of claim 16, wherein the application further comprises a multimedia application and the controller is further configured to; ~~, the adapter further comprising:~~

obtain a quantity of multimedia streams; and
commit a portion of the memory to each multimedia stream.
~~an obtainer of the quantity of simultaneous multimedia streams; and a-setter of the quantity of the one or more segments in reference to the quantity of simultaneous multimedia streams, the setter being operably coupled to the obtainer of the quantity of simultaneous multimedia streams.~~

18. (Canceled)

19. (Currently Amended) The data storage device disc drive of claim 12, wherein the volatile memory device further comprises a cache.

20. (Canceled).

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21. (Currently Amended) An information handling system to manage one or more defects of a mass storage device comprising:

a recording medium; ~~having~~
a defect table that is partitioned into a plurality of segments;
a processor operably[,] coupled to the recording medium;
a volatile memory device operably coupled to the processor, having a defect buffer that is smaller than the defect table; and
means operative on the processor for managing the defect table and the defect buffer.

22. (Currently Amended) The information handling system of claim 21, wherein the means operative on the processor further comprises:

a command that, when executed, will transfer transferor of at least one of the plurality of segments of the defect table into the defect buffer.

23. (Currently Amended) The information handling system of claim 22, wherein the command transferor further comprises the functions of:

determining a determiner of at least one of a plurality of segments of the defect table that are associated with a plurality of most-recently-used data regions of the recording medium ~~of the mass storage device, the determiner being operably coupled to the defect table on the recording medium;~~ and
transferring a transferor of at least one of the plurality of the most-recently-used segments of the defect table into the volatile ~~storage memory device, the transferor being operably coupled to the determiner, the defect table, and the defect buffer.~~

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24. (Currently Amended) The information handling system of claim 22, wherein the command transferor further comprises the functions of:

determining a partition determiner, that determines that the defect table on the recording medium is partitioned into a plurality of segments, the partition determiner being operably coupled to the recording medium;

determining a defect table size determiner, that determines that the defect table on the recording medium is bigger than the defect table in the volatile memory device, the size determiner being operably coupled to the recording medium; and

transferring a segment transferor, that transfers the segment of the one or more segments of the defect table on the recording medium into the defect table in the volatile storage device, the segment transferor being operably coupled to the recording medium, the partition determiner, and the size determiner.

25. (Original) The information handling system of claim 24, wherein the one or more segments further comprise one or more segments that are physically distributed throughout the recording medium.